

Fig. 1. Conceptual Block Diagram of XTCQAM Transmitter

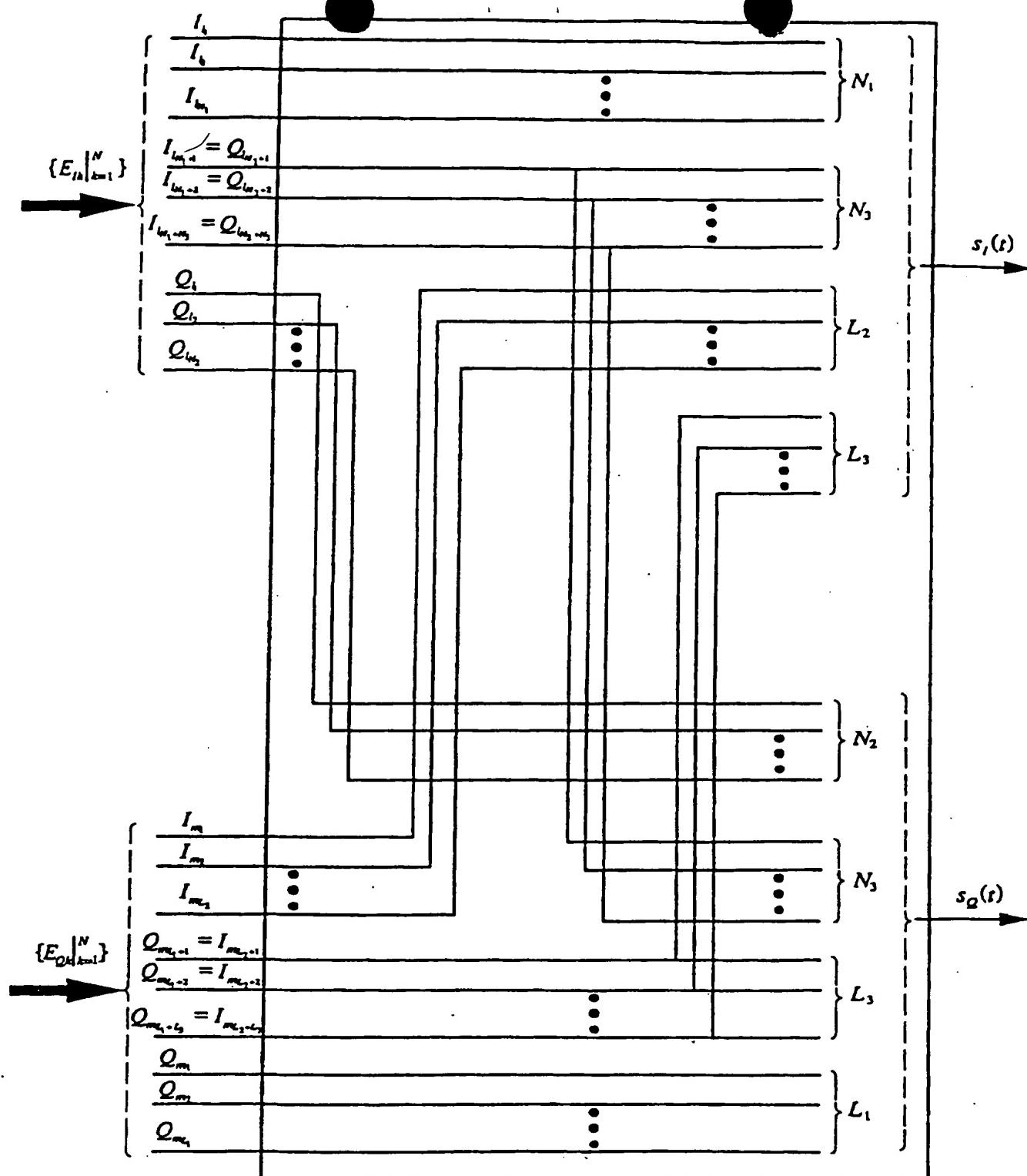


Fig. 2. Crosscorrelation Mapper

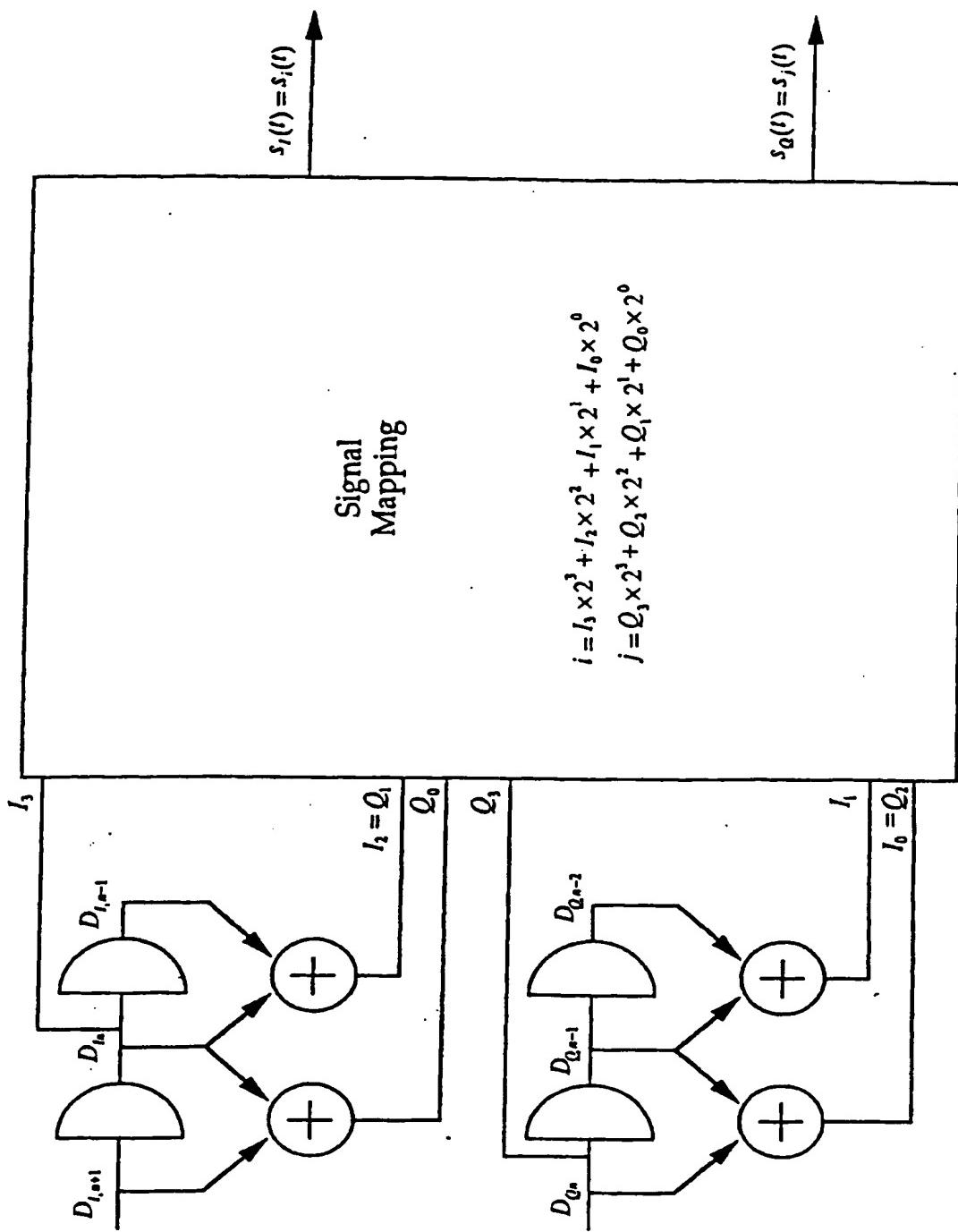


Fig. 3. XPSK (FQPSK) Embodiment of XTCQM Transmitter

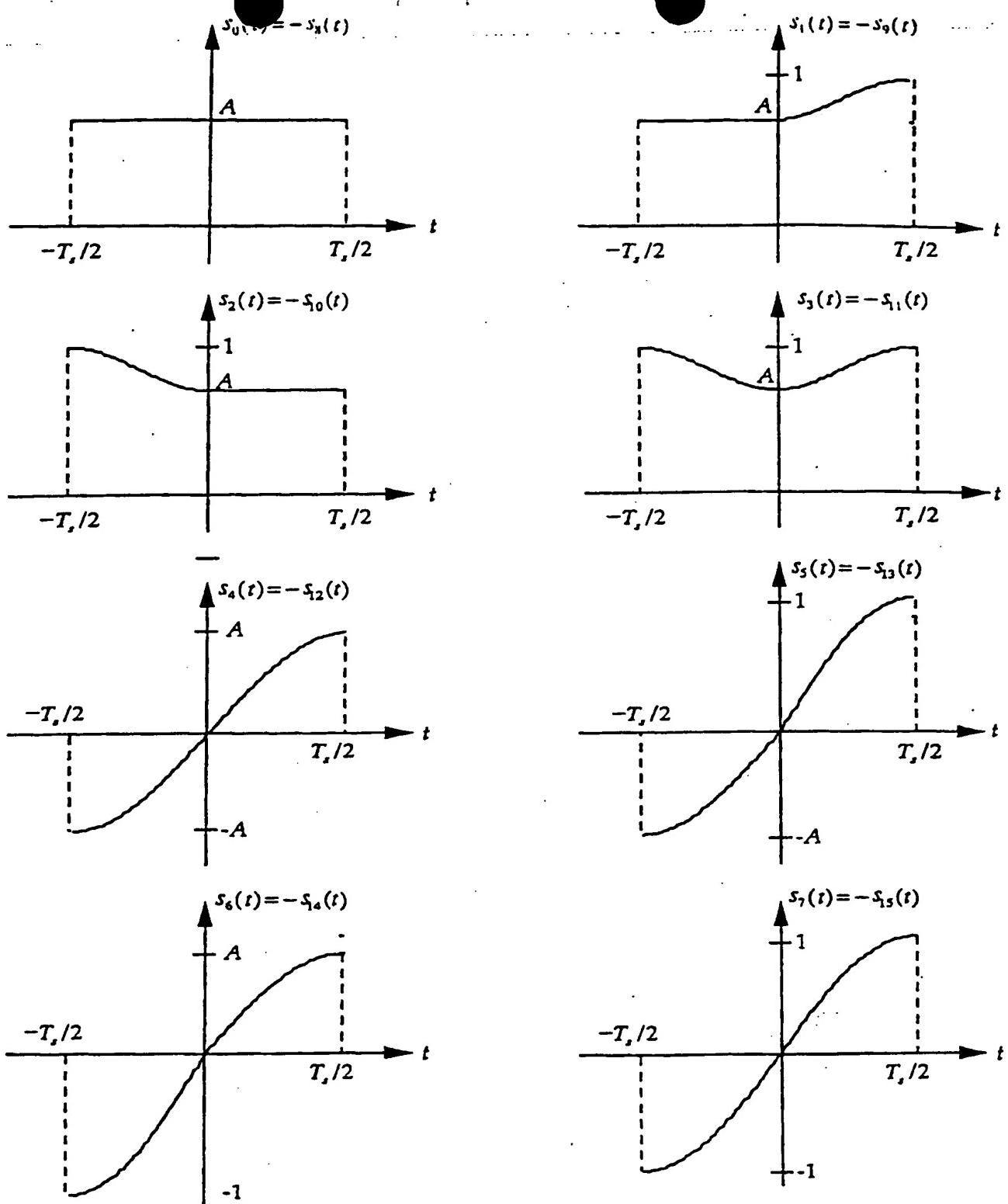


Fig. 4. FQPSK Full Symbol Waveforms

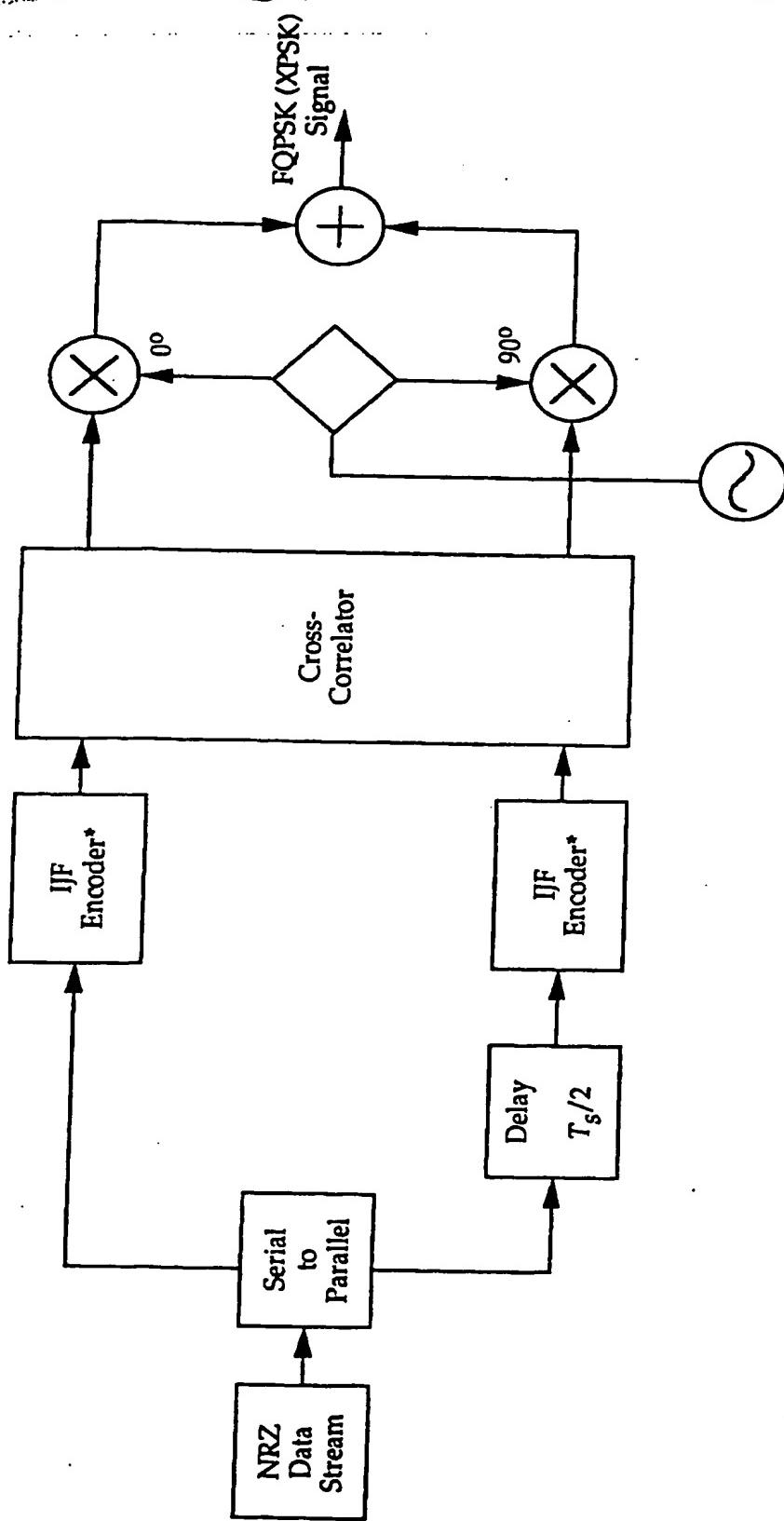


Fig. 5. Conceptual Block Diagram of FQPSK (XPSK)

*Note that what is referred to as an "IIF Encoder" is in fact a mapping function without any error-correcting capability.

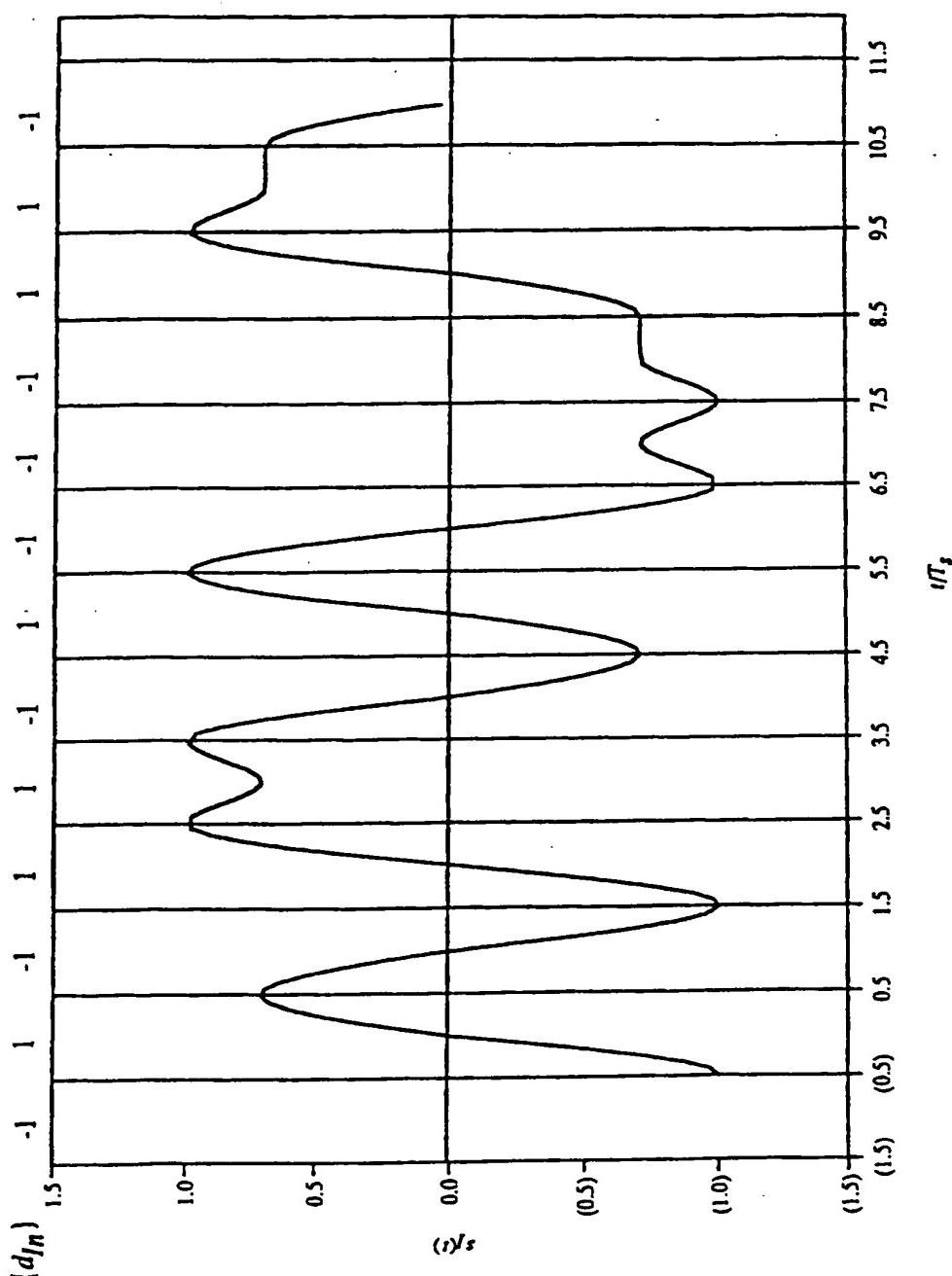


Fig. 6a. InPhase FQPSK (XPSK) Output

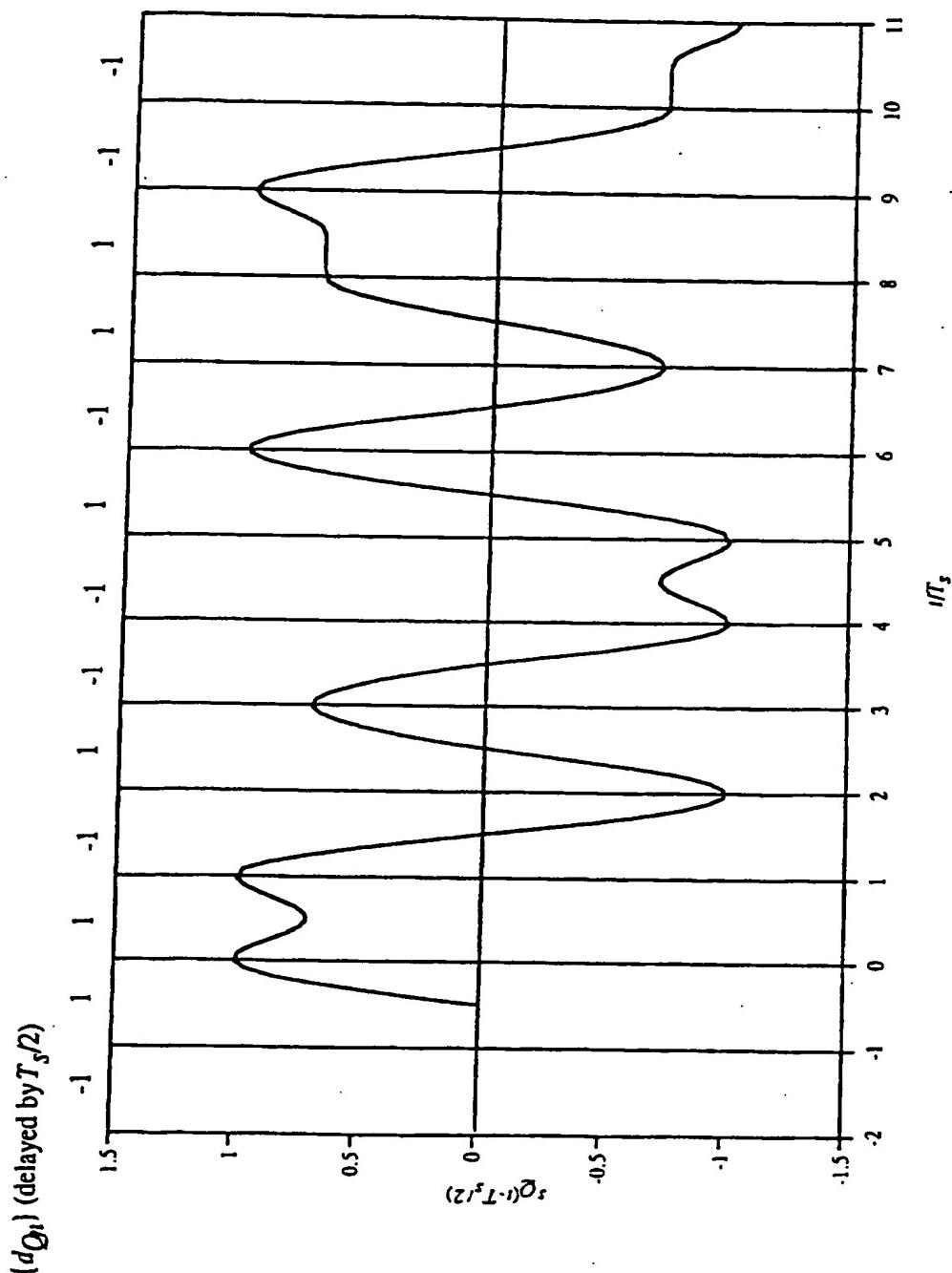


Fig. 6b. Quadrature Phase FQPSK (XPSK) Output

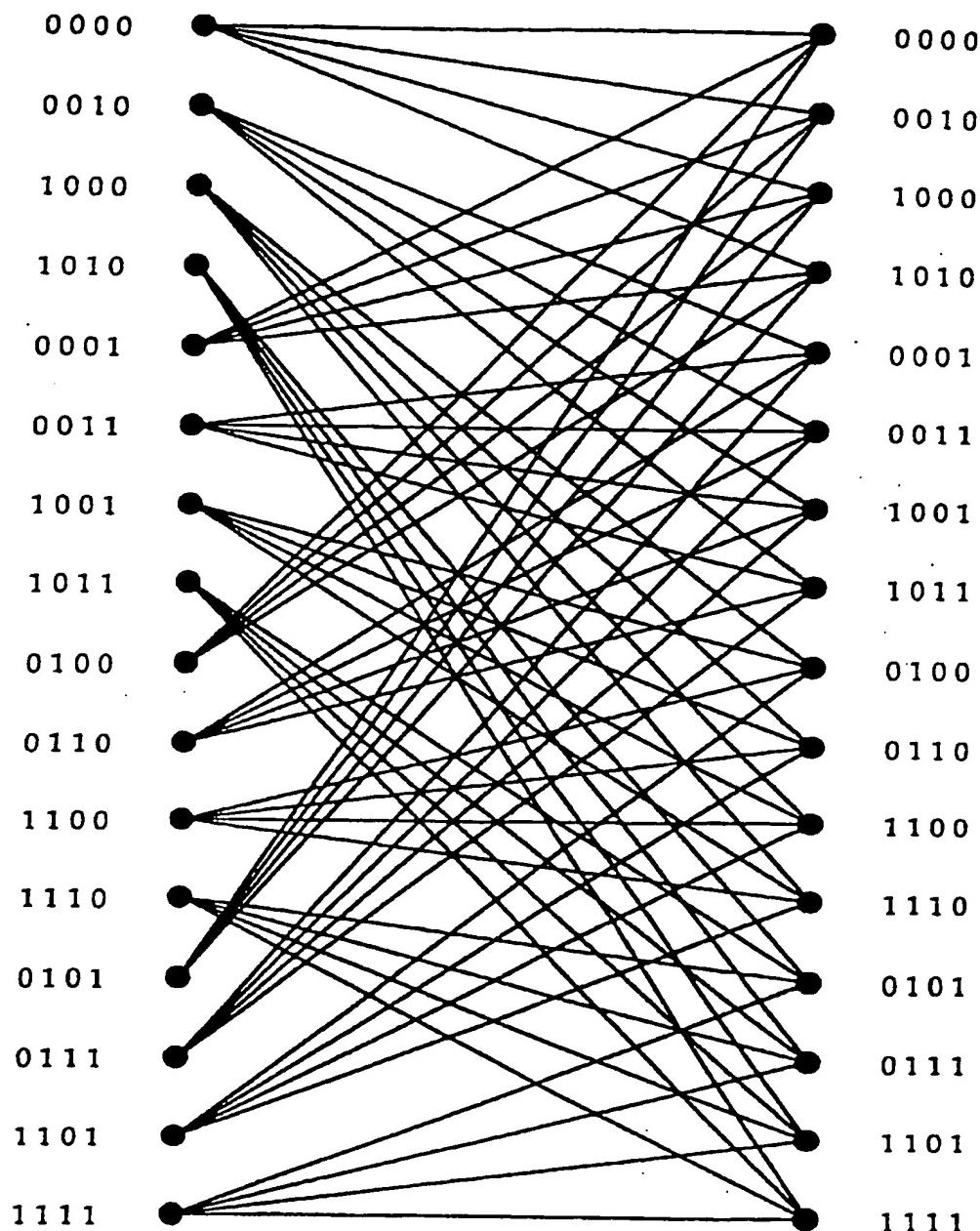
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Fig. 7. 16-State Trellis Diagram for FQPSK

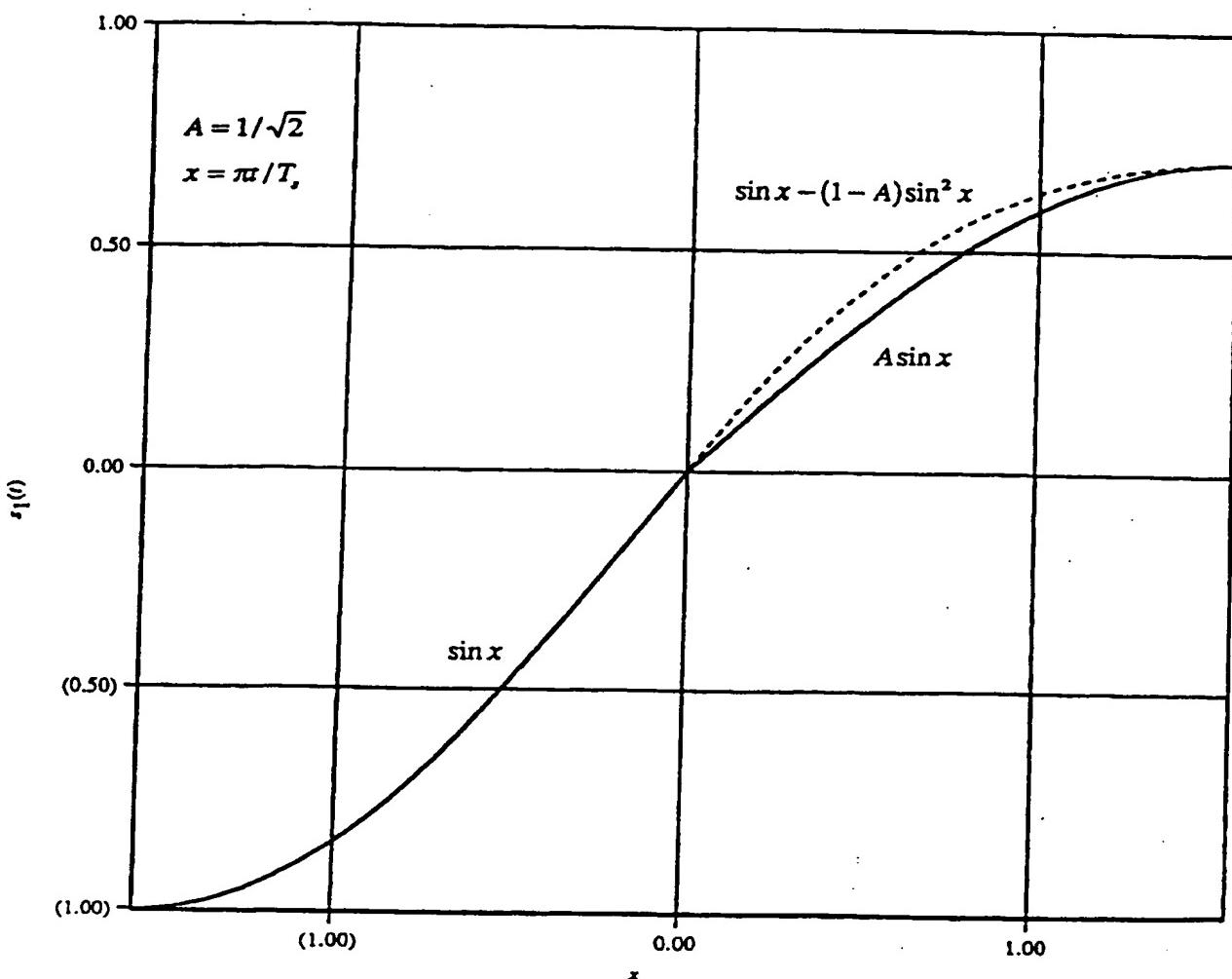


Fig. 8. Original and New FQPSK Pulse Shapes

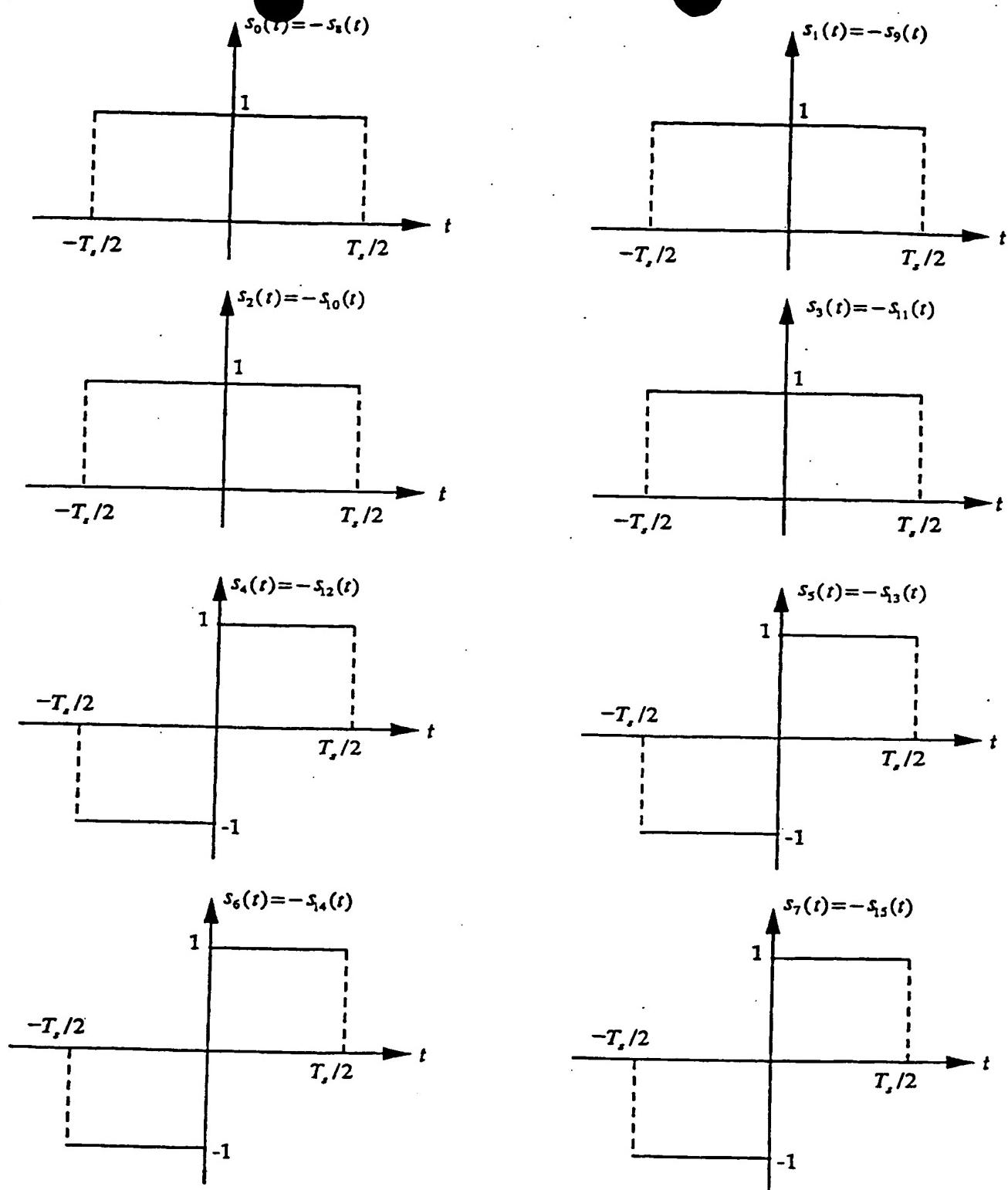


Fig. 9. OQPSK Full Symbol Waveforms

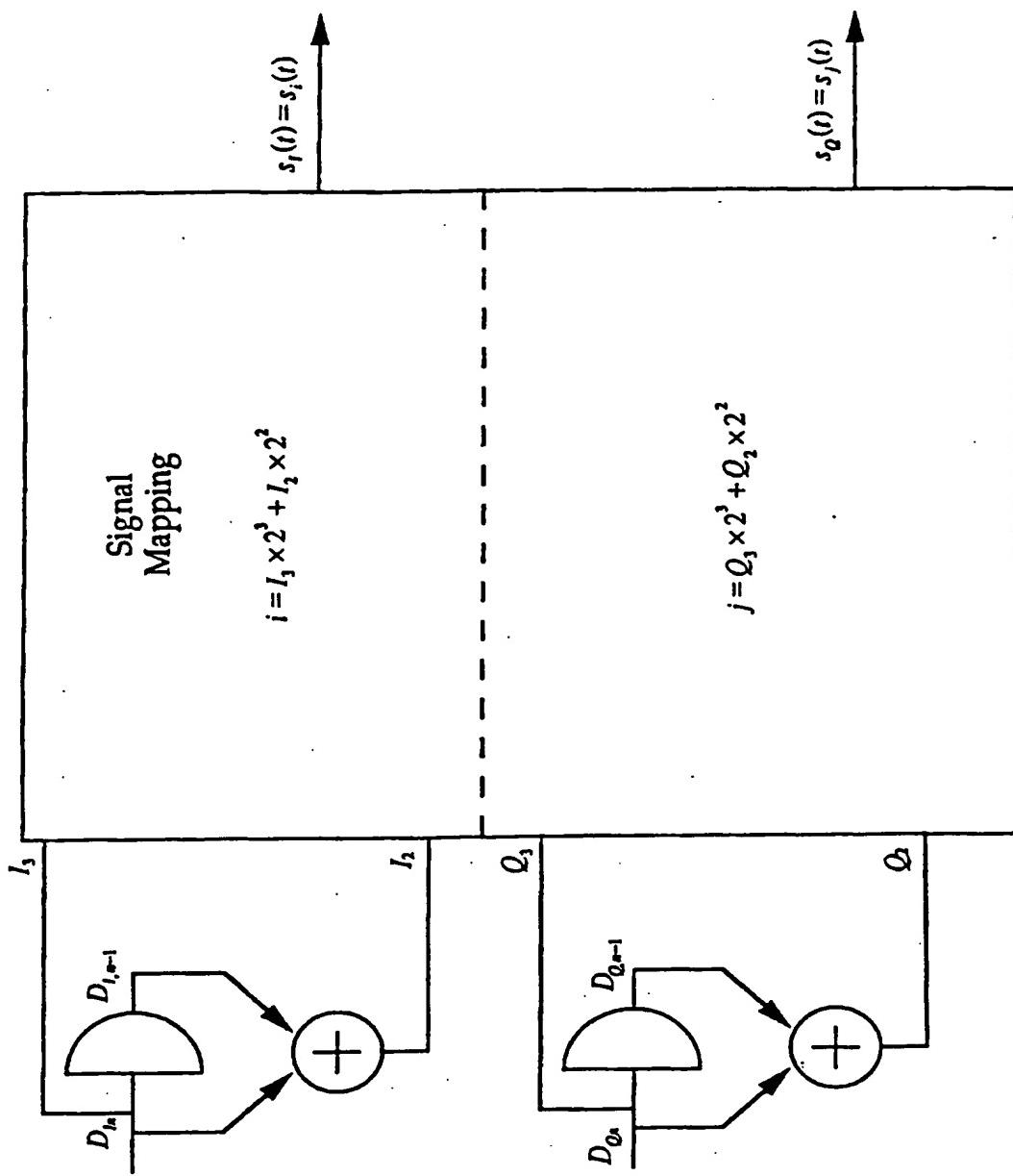


Fig. 10. Trellis Coded OQPSK Embodiment of XTCQM Transmitter

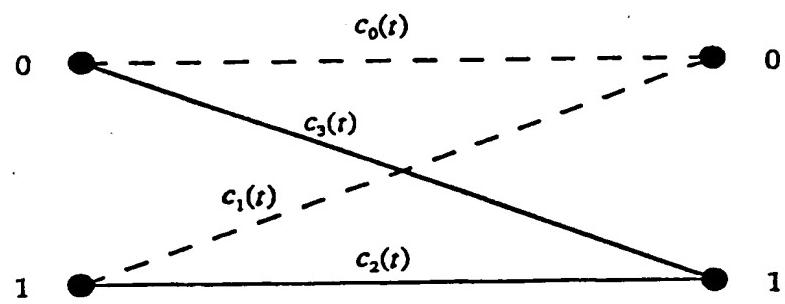


Fig. 11. 2-State Trellis Diagram for OQPSK

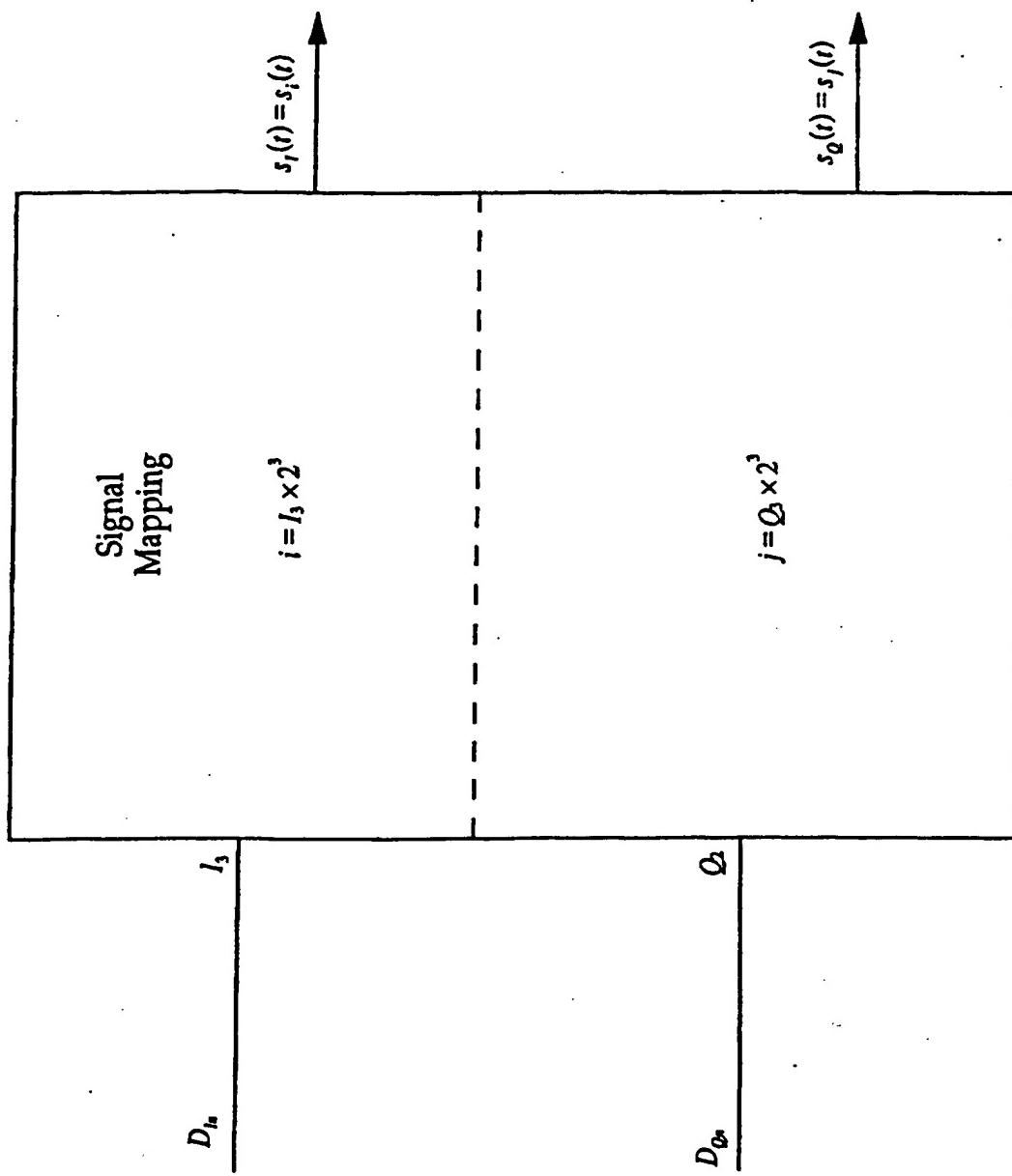


Fig. 12. Uncoded QPSK Embodiment of XTCQFM Transmitter with NRZ Data Formatting

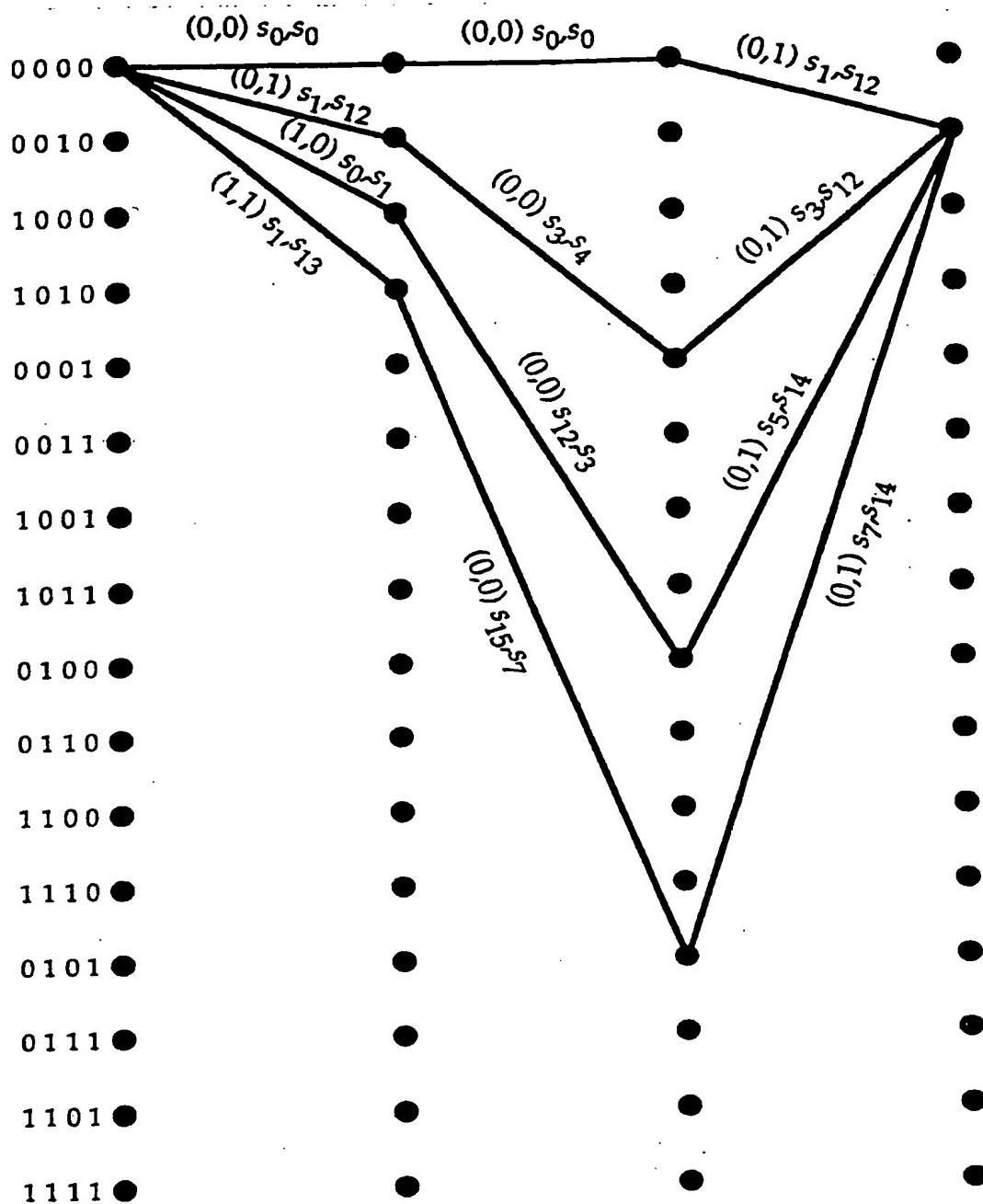
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Fig. 13. Paths of Length 3 Branches Starting in State 1 and Ending in State 2